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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

FELTON, MICHAEL J

ART UNIT

PAPER NUMBER

1791

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/600,712	Applicant(s) DUBE ET AL.	
	Examiner MICHAEL J. FELTON	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 61-68, 70-84 and 86-89 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 61-68, 70-84 and 86-89 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/28/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 61-68, 70-84, and 86-89 have been considered but are moot in view of the new ground(s) of rejection.
2. The applicant's amendment of claim 66 to overcome the claimed matter not shown in the drawings does properly address the missing description of the invention being claimed. The claim continues to be directed to a "single piece of material" which is not shown in the drawings. All embodiments shown have coaxial filters representing and inner and outer layer of filter material, which is not interpreted as "a single piece of material".

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the single filter material must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure

is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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6. Claims 61, 64, 65, 66, 67, 68, 70-72, 75, 76, 78, 81-83, 87, and 88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Irby Jr. et al. (US 3,390,686) in view of Berger (US 4,046,063) and Dorsey (US 5,549,124).

7. Regarding claim 61, 64, 65, 67, 70, 78, 81, and 82 Irby Jr. et al. disclose a coaxial cigarette filter with an outer filter material, an inner filter material (figure 2; col. 4, 1-17), a cavity within the inner material that contains a generally spherical capsule composed of gelatin that contains a diluting agent (water) and flavoring, metal salts, activated charcoal (for altering smoke composition), and/or medicines (col. 3, 18-61). Irby Jr. et al. also teach that cellulose acetate tow, or other filter materials used, can be treated with a stiffening material (col. 3, 11-17) and that the filter should be resilient and return substantially to its tubular shape (col. 1, 49-55). However, Irby Jr. et al. do not disclose that the cavity should extend to the tobacco rod or away from the tobacco rod and do not disclose a cylindrical first end and a conical second end.

8. Berger discloses a cigarette filter with a cylindrical end and a conical end composed of inner and outer filter materials (similar to Irby Jr. et al.) but does not disclose filling the cavities within the inner material. Berger illustrates the open internal cavity open toward the mouth end (figure 1), however, it is disclosed that it would be reasonable to reverse the orientation (col. 4, line 67--col. 5, line 7). It would have been obvious to one of ordinary skill in the art at the time of invention to fill the void within the filter of Berger with other filter materials, including activated carbon or liquid capsules such as those disclosed by Irby Jr. et al., because although Berger indicates that it is desired to have voids it is extremely common in cigarette filters to fill cavities with active

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substances, such as in the plug-space-plug filter arrangement. By using the inventions of Berger and Irby Jr et al. together, it would have been obvious to one of ordinary skill that unique air flow (as disclosed by Berger) and flavor delivery (as disclosed by Irby Jr. et al.) can both be achieved.

9. In addition, Dorsey discloses a capsule in a cavity that contains a second region surrounding the capsule that connects to the tobacco rod and the filter element, and that when broken, releases fluid to wet the tobacco and the filter element. The wet tobacco helps filter the smoke as does the wetted filter material. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention that the invention of Irby Jr. et al. and Berger could be used with the cavity of Dorsey to deploy the liquid contained in the capsule to the tobacco (as taught by Dorsey), to the filter material (as taught by Irby Jr. et al.), or to both (as taught by Dorsey) (abstract, col. 1-col. 2).

10. Regarding claim 66, the filters of Berger and Irby Jr. et al. disclose coaxial filters but do not disclose making the filters out of a single piece of filter material. It would have been obvious to one of ordinary skill in the art at the time of invention to make the filters out of a single piece of material, because it has been held that forming in one piece an article with has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (189).

11. Regarding claims 68, 75, 83, and 87 Berger disclose a 2 axis and a 3 axis crimp on the inner material (see figures 1, 5, 6, and 7).

12. Regarding claim 71, Irby Jr. et al. disclose a capsule with about a 3.5 mm diameter (0.12 inches) but don't indicate the size of the cavity. However, it would have

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been obvious to one of ordinary skill in the art at the time of invention that the cavity would have to be larger than the capsule (col. 3, 18-61).

13. Regarding claim 72, Irby Jr. et al. and Berger (figure 1) show the cavity occupying approximately half the length of the filter.

14. Regarding claims 76 and 88, Irby Jr. et al. indicate supplying medicines and/or flavors in the capsule. The examiner considers breath freshening agents to be either medicines or flavors, and are therefore obvious over Irby Jr. et al.

15. Claims 62, 77, 79, and 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Irby Jr. et al. (US 3,390,686), Berger (US 4,046,063), and Dorsey (US 5,549,124) as applied to claim 61 above, in further view of the applicant's admitted prior art.

16. Regarding claims 62 and 79, Irby Jr. et al. and Dorsey do not indicate treating cellulose acetate with triacetin plasticizer. However, the applicant states in a description of prior art in paragraph [0002] that, "Typically, a filter element comprises cellulose acetate tow plasticized using triacetin...". Therefore, it would have been obvious to one of ordinary skill to plasticize cellulose acetate using triacetin.

17. Regarding claims 77 and 89, the applicant indicates that the tacky nature of the inner surface of the cavity is a result of the triacetin plasticizer "or other components of the filter" (paragraph 0059). Because it is well known to make filters out of cellulose acetate plasticized using triacetin as discussed in the rejection of claim 62, it would have been obvious that such a typical filter material would have had an inherently tacky

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inner surface. In addition, Irby et al. teach the use of adhesives such as starches to adhere capsules (col. 4, 1-20).

18. Claims 63, 73, 74, 80, 84, and 86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Irby Jr. et al. (US 3,390,686), Berger (US 4,046,063), and Dorsey (US 5,549,124) as applied to claims 61 and 68 above, in further view of Arterbery et al. (US 5,365,951). Irby et al. indicate the need for the filter materials to be resilient and can be made of treated cellulose acetate tow. Berger discloses that the inner material be lower denier than the outer material. However, Irby et al. and Berger do not disclose using steam bonding to treat cellulose acetate. Arterbery et al. teach that cellulose acetate tow, plasticized with triacetin, can be steam bonded to make a material strong enough to not need a paper wrapper. It would have been obvious to one of ordinary skill in the art at the time of invention that one could use the teaching of Arterbery et al. of a toughened filter material in the invention of Irby et al. because Irby et al. teaches the possible need for treating cellulose acetate to improve its properties.

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL J. FELTON whose telephone number is (571)272-4805. The examiner can normally be reached on Monday to Friday, 7:30 AM to 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Phillip C. Tucker can be reached on 571-272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. J. F./
Examiner, Art Unit 1791

/Philip C Tucker/
Supervisory Patent Examiner, Art Unit 1791